IN THE ABSTRACT

The replace the abstract previously presented with the following *new abstract*:

ABSTRACT OF THE DISCLOSURE

The invention relates to a distribution network for electromagnetic signals, preferably for use in an antenna arrangement in the microwave range, comprising at least two waveguide branches, in which branches the electromagnetic signals propagate in different directions in relation to one another. The invention is characterized in that the at least two waveguide branches overlap one another at one point in the distribution network. The waveguide branches in the distribution network which overlap one another are preferably neighbouring branches and have at least one aperture in the part of the branch which overlaps the other branch.

IN THE SPECIFICATION

Please substitute the following paragraphs/headings in the specification for corresponding paragraphs/headings previously presented. A copy of the amended specification paragraphs/headings showing current revisions is attached.

Replace the paragraph beginning at page 1, line 11, with the following rewritten paragraph/s:

In a telecommunication system, there may be a requirement for using so-called point-to-multipoint antennas. This is a type of antenna which is used for a central node in the system to be able to communicate with a plurality of other terminals in the system which are located within a certain angle sector. In other words, it is a requirement of an antenna of the said type to be able to generate a lobe which covers the desired angle sector.

Replace the paragraph beginning at page 1, line 30, with the following rewritten paragraph/s:

A radiating element of this type is fed from a distribution network which normally has branches from one or more feed points from which the distribution network is provided with energy. A normal method of producing an aperture antenna is to construct the distribution network in waveguide technology and to arrange apertures along the branches of the distribution network. For the apertures to be excited, it is necessary that they are arranged eccentrically with respect to an imaginary centre line in the longitudinal direction of the distribution network. The eccentrically arranged apertures should also be arranged alternately

with respect to the imaginary centre line. The eccentric placement of the apertures with respect to the feed network, which is necessary for them to function as antenna elements, however, entails a number of disadvantages, above all that a high degree of cross polarization between the antenna elements is produced, above all in vertical polarization. In antennas with horizontal polarization, the phenomenon of cross polarization is troublesome above all in systems which require a wide bandwidth in the antenna.

Replace the paragraph beginning at page 2, line 15, with the following rewritten paragraph/s:

EP 788 186 discloses a device for use in antenna units, such device comprising a first feeder network in stripline or microstrip technology, said first feeder network being laterally separated from a ground plane by an electrically isolating bearer. The ground plane comprises a number of apertures which are excited by the first feeder network. An improvement of this device would be to decrease its height.

Replace the heading at page 2, line 22, with the following new heading:

SUMMARY

Replace the paragraph beginning at page 3, line 1, with the following rewritten paragraph/s:

These problems are solved with the aid of a distribution network for electromagnetic signals, preferably for use in an antenna arrangement in the microwave range, comprising at least two waveguide branches, in which branches the electromagnetic signals propagate in different directions with respect to one another, the at least two waveguide branches overlapping one another at one point in the distribution network. The branches which overlap one another are suitably neighbouring branches in the distribution network.

Replace the heading at page 3, line 32, with the following new heading:

BRIEF DESCRIPTION OF THE FIGURES

Replace the heading at page 4, line 16, with the following new heading:

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Replace the paragraph beginning at page 5, line 9, with the following rewritten paragraph/s:

Through-going apertures 115, 116, 117, 118, 119, 120, 121 and 122, preferably in the shape of slots, intended to constitute radiating elements in the antenna, are arranged in the part of a respective branch which overlaps the

neighbouring branch. It is suitably the end of the branches which overlaps a corresponding part of a neighbouring branch/neighbouring branches which means that the respective radiating element will end up at the end of its branch. It is noted that like reference numerals 115, 116, 117, 118, 119, 120, 121 and 122, numerals 123, 127, 128, 129 and 130 also refer to through-going apertures.

Replace the paragraph beginning at page 8, line 1, with the following rewritten paragraph/s:

The electromagnetic signals enter the distribution network in the plate 330 through a connection and feed point 336 in the distribution network. At this point, the distribution network is suitably connected to the external equipment with which it is intended to cooperate, such as, for example, a telecommunication system.

Replace the paragraph beginning at page 8, line 13, with the following rewritten paragraph/s:

Figure 4 shows an alternative 410 to the plate 100 in Figure 1 and the plate 310 in Fig 3, intended to be included in an antenna arrangement for vertical polarization. What has been described above concerning the plates 100 and 310 also applies to the plate 410, with the difference that since the antenna, in which

the plate is to be included, is an antenna for vertical polarization, the apertures 415, 416, 417, 418, 419, 420, 421 and 422 in the plate 410 have the same main direction of extension as the branches in the distribution network.

Replace the paragraph beginning at page 8, line 21, with the following rewritten paragraph/s:

Furthermore, according to the invention, the apertures 415, 416, 417, 418, 419, 420, 421, 422, 423 . . . 427, 428, 429 and 430 in the plate 410 are placed at a distance of ¾ λ_g from the end point of their respective branch, where λ_g is the wavelength of the electromagnetic signal in the waveguide. This distance is ½ λ_g more than normal but provides good characteristics, for example with respect to the bandwidth of the antenna. As in the Fig. 1 embodiment, energy is conducted to the distribution network via feed points 411, 412, 413 and 414 (see points 111-114 in the Fig. 1 embodiment discussed above).

Replace the paragraph beginning at page 8, line 27, with the following rewritten paragraph/s:

Figure 5 shows, like Figure 2, the plate with grooves on its reverse side. As can be seen in Figure 5, the apertures 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429 and 430 are also preferably arranged as a group